

L Number	Hits	Search Text	DB	Time stamp
1	1	"55010858"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/04/22 16:12
5	78	((petroleum or crude or "heavy oil") with "X-ray") and sulfur	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/04/22 16:14
6	21	(petroleum or crude or "heavy oil") with ("X-ray" near3 fluorescen\$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/04/22 18:03
3	288	(petroleum or crude or "heavy oil") with "X-ray"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/04/22 18:03
7	3665	(436/25,29,164,172).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/04/22 18:03
8	432	((436/25,29,164,172).CCLS.) and (petroleum or crude or "heavy oil")	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/04/22 18:03
9	121	((((436/25,29,164,172).CCLS.) and (petroleum or crude or "heavy oil")) and sulfur	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/04/22 18:03
10	22	(((((436/25,29,164,172).CCLS.) and (petroleum or crude or "heavy oil"))) and sulfur) and "X-ray"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/04/22 18:03

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FILE 'CAPLUS' ENTERED AT 15:01:20 ON 22 APR 2004

L1 1 PETROLEUM (S) "X-RAY FLUORESCENCE" (S) SULFUR (S) (SILVER OR ARGENTUM OR AG)

L2 1 (PETROLEUM OR "HEAVY OILS" OR CRUDE) (S) "X-RAY FLUORESCENCE" (S) SULFUR (S) (SILVER OR ARGENTUM OR AG)

L3 52 (PETROLEUM OR "HEAVY OILS" OR CRUDE) (S) "X-RAY FLUORESCENCE" (S) SULFUR

L4 4 L3 AND (SILVER OR ARGENTUM OR AG)

L4 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:305348 CAPLUS

DOCUMENT NUMBER: 136:343119

TITLE: "Rapid assay of chemical elements in petroleum products by x-ray diffraction"

AUTHOR(S): *Kreknin, Yu. S.*

CORPORATE SOURCE: Close Joint-Stock Company NPO Spectron-OPTEL, St. Petersburg, Russia

SOURCE: **Chemical and Petroleum Engineering (Translation of Khimicheskoe i Neftegazovoe Mashinostroenie) (2001), 37(9-10), 470-473**

CODEN: CPTEAW; ISSN: 0009-2355

PUBLISHER: Kluwer Academic/Consultants Bureau

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The determination of dissolved or suspended impurities in petroleum was important to find solns. for an economic processing. A highly sensitive x-ray fluorescence method was developed to determine the metal, sulfur, and chloride content in petroleum products over a broad range. Several modifications of the instrument allowed the selection of optimum adjustment for specific measurements. Besides the solving of the anal. problems of petroleum products, the instrumentation could also be used to analyze alloys, waste water and to perform environmental analyses. REFERENCE COUNT: 3

L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:281203 CAPLUS

DOCUMENT NUMBER: 137:249924

TITLE: "Rapid determination of elements in petroleum products by x-ray spectroscopic technique"

AUTHOR(S): *Kreknin, Yu. S.*

CORPORATE SOURCE: ZAO "NPO Spektron-OPTEL", St. Petersburg, Russia

SOURCE: **Gazovaya Promyshlennost, Seriya: Gazifikatsiya, Prirodnyi Gaz v Kachestve Motornogo Topliva, Podgotovka, Pererabotka i Ispol'zovanie Gaza (Nauchno-Tekhnicheskii Sbornik) (2002), (1), 57-65**

CODEN: GPSGBA

PUBLISHER: OOO IRTs Gazprom

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The application of Spektroskan apparatus in elemental anal. of petroleum products, especially in lubricating oils was studied. The parameters of x-ray spectral fluorescence anal. of different metals in lubricating oil using this instrument were presented. The reproducibility data for S and chloride anal. in petroleum products were also discussed.

L4 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:132027 CAPLUS

DOCUMENT NUMBER: 128:182279

TITLE: "Determination of contaminating elements in petroleum by x-ray fluorescence"

AUTHOR(S): *Arriola, H.; Monroy, F.*

CORPORATE SOURCE: Fac. de Quimica, Q. Inorganica y Nuclear, C.U. Edif. D UNAM, 04510, Mex.

SOURCE: **Revista de la Sociedad Quimica de Mexico (1997), 41(6), 251-254**

CODEN: RSQMAN; ISSN: 0583-7693

PUBLISHER: Sociedad Quimica de Mexico

LANGUAGE: Spanish

AB Determination of different elements in crude oil by x-ray fluorescence anal. is described. The measurements were performed with an x-ray fluorescence spectrometer with a hyperpure germanium detector with a resolution of 180 eV and a 45 MCi 241Am source encapsulated in stainless steel. A calibration line was established using com. standard solns. The results are satisfactorily, and the advantages of this method are speed, simultaneous multielemental determination and various possible applications.

REFERENCE COUNT: 11

L4 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1980:506542 CAPLUS

DOCUMENT NUMBER: 93:106542

TITLE: Apparatus for the continuous x-ray fluorometric determination of trace elements present in petroleum and hydrocarbons

PATENT ASSIGNEE(S): Yokogawa Electric Works, Ltd., Japan

SOURCE: Jpn. Tokkyo Koho, 5 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 55010858	B4	19800319	JP 1970-126890	19701228
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PRIORITY APPLN. INFO.: JP 1970-126890 19701228

AB A completely automated apparatus is claimed for the continuous detn of trace elements (e.g. S in petroleum) by x-ray fluorescence (x-rays from a Ag-Sn target bombarded with radiation from a 241Am source). The apparatus does not employ a so-called log amplifier and is used when the changes occurring in the d. of the hydrocarbon and in the concentration of the trace elements are relatively small, d. compensation being carried out for the hydrocarbon and output being given in a linear fashion.